

## CROSS-CULTURAL AND HISTORICAL COMPARISONS IN THE PALATABILITY OF SEVERAL EGYPTIAN BIRD SPECIES

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**ABSTRACT.**—Eighteen samples of meat, representing 14 species of birds and one species of domestic mammal, were anonymously presented to a taste-testing panel. The panel, composed of five Egyptians and eight Americans, rated the meats using a scoring system from 5 (excellent) to 1 (very poor, almost inedible). Intra- and inter-cultural differences in the palatability of the various meats are discussed, as well as historical changes in the use of certain birds as food.

**RESUMEN.**—Con el objeto de poner a prueba de sabor, se presentó a un grupo selecto, de forma anónima, diez y ocho muestras de carne. Entre dichas muestras se encontraban representados catorce generos de aves y un mamífero doméstico. Este grupo, consistió de cinco egipcios y ocho estadounidenses, que clasificaron las carnes usando un sistema de calificación de 5 (excelente) a 1 (de mal sabor, casi incomible). Se discutieron las diferencias intra- e inter-culturales de saborear distintas carnes, así como también se discutieron cambios historicos del consumo de ciertas aves como alimento.

**RESUME.**—On a présenté anonymement 18 échantillons de la viande de 14 espèces des oiseaux et d'une espèce de mammifère domestique à quelques personnes pour demander ses opinions gastronomiques. Les 5 égyptiens et 8 américains ont évalué les viandes selon un système de classification de 5 (excellente) jusqu'à 1 (tres mauvaise, presque incomestible). On discute les differences entre les cultures et dans le même culture selon l'acceptabilité des divers viandes. On discute aussi les changements historiques dans l'usage de certains oiseaux comme l'aliment.

*"What is food to one man may be fierce poison to others."*

—Lucretius, *De Rerum Natura*

*"O ye people! Eat of what is on earth, Lawful and good;  
and do not follow the footsteps of the Evil One."*

—The Koran, Surah 2, verse 168 (Ali 1983:66)

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## INTRODUCTION

Over the years, an intractable debate has raged over the issue of whether dietary prohibitions are related mainly to cultural or ecological exigencies. The "materialist" or "ecological" school insists that, intentionally or not, food taboos serve to maintain checks and balances between people and their environments. McDonald (1977:743), for example, argues that food taboos function to conserve scarce game resources. Ross (1978:2, 15), also in ecological terms, believes that cultural explanations alone are too general; instead taboos relate to the "total adaptational pattern" of a given culture to its environment: "It is no longer plausible to maintain that differences in dietary behavior are simply the consequence of dissimilarities in world view," he concludes. On the other hand proponents of culture as a "superorganic" phenomenon and cautious cultural ecologists respectively discount and temper arguments for environments' bearing on food prohibitions. Carnerio (1978:20) admonishes that not every taboo "starts out as a cognitive counterpart of adaptive behavior. Indeed we must guard against the tendency to push ecological explanations too far . . . there is always a residue of culture that may never be explainable ecologically." A step yet further away from the materialists' explanations, "mentalists" point out that there is often no logical, economic or ecological basis whatsoever for food selection. Gordon (1983:17, 24), for example, remarks that "diet has always been influenced by non-nutritional factors [and embraces] a system of meanings and values that transcend the material content of the food and the ways in which it affects our bodies." Simoons (1961:106), author of the classic treatise on food avoidance in the Old World, reviews but finally shys altogether away from ecological explanations of taboos: "the foods used by a group are chosen in accordance with cultural attitudes and patterns towards food—the group foodways . . . Western man, despite his frequent temptation to claim that *his* foodways are based on rational considerations, is no more rational in this than other men, for it makes no better sense to reject nutritious dogflesh, horseflesh, grasshoppers and termites as food than to reject beef or chicken flesh." Rea (1981:81) concluded that the resource utilization and food taboos of several Sonoran Desert cultures were not constrained by ecological determinism, "but that there are ecologically imposed limits to dietary selectivity."

In observing Egyptian foodways, we were intrigued with this core issue of permissible and prohibited foods, but dismayed by the conventional choice to be made between cultural and ecological explanations of such foodways. Our interests focused not so much on black-and-white choices between tabooed and allowable food as on the grey area between permissibility and revulsion, DeBoer's (1987:45) zone "somewhere between the gastric and the cerebral" that seems to be visited so regularly in the Egyptian diet. Moreover, as American expatriates living in Egypt, we were afforded the opportunity of being able to study food preferences on a cross-cultural basis. And finally, we recognized the opportunity to remove cultural preconceptions altogether from given food items, and compare the results cross-culturally. This paper describes the experiment and results that followed.

Several questions arose. The first was that, if no taboos were violated, and all preconceived notions of palatability were discarded, how would people react to the taste of foods? Secondly, we wanted to determine how particular foods, devoid of their cultural connotations, might appeal to modern members of different cultures. Third, we wanted to know whether there might be general cross-cultural differences in modern perceptions of palatability. Finally, we felt that historical comparisons would help contrast our study against the particular cultures and species examined, and allow us to examine the evolution of the cultural palate through time.

### METHODS AND MATERIALS

We compared the taste preferences of members of parallel classes of two societies toward a single food group. We therefore chose to compare perceptions of wild bird meats between middle-class, urbanized Egyptians and Americans. The participants were told only that these were "bird meats," and care was taken in both explanation and preparation to ensure that no taboos were violated. This was particularly important for the Egyptian participants, all of whom were Muslims. The relevant Islamic restrictions insist that blood be drained from the animals to be eaten while God's name is mentioned, and that no bird possessing talons be eaten (al-Qaradawi 1985:53, 56). Notably, all birds presented in the experiment were procured from Egyptian fowlers who routinely slaughter the animals in ritual fashion for their clients.

During the winter months, when considerable numbers of Palearctic bird migrants are in the Nile Delta, wild bird markets prosper in several local cities and villages (Mullie 1989). The wild birds sold in the markets of Port Said and Dumyat (Damietta) are taken in the Lake Manzala area. Some are shot, but most of these animals are netted and delivered alive to market to be sold as table fowl. Numerous species and large numbers of individuals are offered for sale. Mullie (1989) provides detailed information on the birds sold in the Nile Delta markets during the winters from 1978 to 1987.

In late December 1982 and from January to April 1983, we made several visits to the Port Said market to obtain wild birds for museum specimens. The birds were prepared as skeletons and study skins, and all are deposited in The University of Michigan Museum of Zoology, Ann Arbor. Within 12 hours of death the breast muscles (*Musculus pectoralis* only) of several prepared birds were removed, washed, placed in a plastic bag with an identification tag, sealed tightly and frozen (for less than two months). Any portion of the muscle that had hemorrhaged by shot or had sustained other trauma was removed.

The meats were thawed, cut into small pieces and cooked without condiments, using corn oil, in an iron skillet (following essentially the procedure of Cott and Benson 1969). The skillet was cleaned and fresh oil added between the cooking for each sample. Each lot was reheated in a grate over a double-boiler before being served.

A taste-testing panel of five Egyptians and eight Americans living in Cairo was assembled. Professions and ages (in parenthesis) represented were: Egyptians—two lawyers (both 26), one student-botanist (22), one soldier (22) and one money changer (24); Americans—six university students (24, 25, 27, 27, 29 and 35), one university professor (31) and one unemployed reporter (26). All 13 participants were presented an anonymous meat sample at the same time and asked to rate the palatability of each by scoring it from 5 (excellent) to 1 (very poor, almost inedible) on individual data sheets (in both Arabic and English). Each meat was presented on a single platter and enough of each was available for several samples if any panel member so desired. Participants did not discuss their opinions until all had scored the sample in progress. On the score sheet a section was provided for comments on the texture, taste and familiarity of each sample. Egyptian participants were invited to respond in Arabic, as we were able to translate their comments.

In western Europe, particularly the British Isles, there have been clear changes in the past 600 years in the use of wild birds as food; many of the taxa involved are the same as presented to the participants of the experiment described herein. Using the historical literature we have attempted to document differences in temporal and cultural use of various wild birds as food.

## RESULTS

During a single session lasting approximately 2.5 hours, 18 samples representing 15 taxa were presented to the taste-testing panel (Table 1). Sixteen samples were avian and two mammalian; the latter was viewed as a potential indicator about any general bias the panelists had towards eating fowl. As an additional control, three taxa were presented twice at spaced intervals. In all three cases the meat was obtained from two to five individuals of each taxon and mixed together, so that each reported sample contained similar proportions of several individuals. Species presented twice (sample number and mean score per sample for the Egyptians and Americans, respectively, in parentheses) include:

*Gallus gallus* (chicken) — sample 1 (3.0, 3.4) and sample 8 (3.8, 4.1)

*Oryctolagus cuniculus* (domestic rabbit) — sample 4 (1.2, 2.5) and sample 11 (2.6, 1.9)

*Phalacrocorax carbo* (Great Cormorant) — sample 9 (2.4, 2.7) and sample 18 (2.0, 2.9)

The ratings for each sample of the repeated taxa did not decline sharply between samples. The effect of satiation appears to have been minimal, as no appetizers were offered, and the portion of each sample provided was small. These findings are particularly relevant in our interpretation of the results of this experiment. If the mean scores of the repeated species had declined significantly from the first to second presentation, it would suggest that the participants had become bored and/or satiated, and the experiment would be of dubious value.

TABLE 1.—Scores of bird meats by course for Egyptians and Americans in order of presentation.

Sample Number and Species	Egyptians n=5		Americans n=8	
	Mean	Range	Mean	Range
1. <i>Gallus gallus</i> (chicken)	3.0	2-5	3.4	2-4
2. <i>Podiceps cristatus</i> (Great Crested Grebe)	2.6	1-4	3.1	1-5
3. <i>Recurvirostra avosetta</i> (Avocet)	2.2	1-4	2.8	2-4
4. <i>Oryctolagus cuniculus</i> (domestic rabbit)	1.2	1-2	2.5	1-4
5. <i>Ardea cinerea</i> (Gray Heron)	2.4	1-3	3.3	1-5
6. <i>Anas acuta</i> (Northern Pintail)	1.8	1-4	3.5	3-4
7. <i>Larus fuscus</i> (Lesser Black-backed Gull)	2.8	1-5	3.4	2-5
8. <i>Gallus gallus</i> (chicken)	3.8	2-5	4.1	2-5
9. <i>Phalacrocorax carbo</i> (Great Cormorant)	2.4	1-4	2.7	1-4
10. <i>Aythya nyroca</i> (White-eyed Duck)	2.4	1-4	3.6	2-5
11. <i>Oryctolagus cuniculus</i> (domestic rabbit)	2.6	2-5	1.9	1-3
12. <i>Limosa limosa</i> (Black-tailed Godwit)	2.6	2-4	3.3	2-4
13. <i>Phoenicopterus ruber</i> (Greater Flamingo)	2.4	1-4	3.8	3-5
14. <i>Anas crecca</i> (Green-winged Teal)	3.0	2-5	3.1	2-4
15. <i>Philomachus pugnax</i> (Ruff)	2.2	1-3	3.0	1-4
16. <i>Egretta garzetta</i> (Little Egret)	2.2	1-3	2.3	1-4
17. <i>Porphyrio porphyrio</i> (Purple Gallinule)	3.0	2-4	3.8	2-5
18. <i>Phalacrocorax carbo</i> (Great Cormorant)	2.0	1-3	2.9	1-4

Below are summary statements for each of the species presented to the panel, comments from the panel on the taste of each sample (E = Egyptian, A = American), and information about the palatability of these various taxa as perceived by different cultures.

*Podiceps cristatus* (Great Crested Grebe)

Egyptians — mean score 2.6, range 1-4.

Americans — mean score 3.1, range 1-5.

Panel comments: "looks strange, tastes good" (E); "like liver" (A); "good—like tender beef" (A); and "strong aftertaste, texture like liver" (A).

Opinions mentioned in the literature indicate that the flesh of this species is regarded generally as poor. Andersson (1872, cited in Cott 1946) considered it "not very palatable." Pecqueur (1963) noted that these grebes were offered for

sale in the Paris markets during February 1956, but presumably only for plumes because their flesh smells of fish. The range of scores and comments from the taste panel indicated a mixed appraisal of the palatability of this species.

*Phalacrocorax carbo* (Great Cormorant)

First Sample:

Egyptians — mean score, 2.4, range 1-4.

Americans — mean score 2.4, range 1-4.

Panel comments on the first sample: "very beefy" (A); "fishy, sandpaper texture" (A); and "somewhat gamey and hint of liver" (A).

Second Sample:

Egyptians — mean score 2.0, range 1-3.

Americans — mean score 2.9, range 1-4.

Panel comments on the second sample: "sweet, a bit tough" (A); "OK, but musty tasting, a little gamey" (A); and "beefy in flavor, with an aftertaste" (A). There was no comment from the Egyptian panelists for either sample.

The literature includes mixed opinions on the gastronomic quality of this species. Pecqueur (1963:120) remarked that the few birds brought to the Paris markets between 1950 and 1962 were most likely sold for plumes and that their flesh is "tres huileuse a forte odeur de poisson. Pascomestible." Fitzgibbon (1976) considered only young Cormorant suitable for the table, for the older birds have dark and redolent meat. However, the Duke of Bedford (Cott 1946) stated that its flavor, although musky, is not fishy, and during World War II a poulterer in Tunbridge Wells, England, offered this meat. A test panel in Zambia (Cott and Benson 1969) gave the flesh of the sub-Saharan breeding form *luqubris* [= *lucidus*] a rating of 7.0 on a scale of 9.0 (excellent) to 2.0 (inedible).

*Egretta garzetta* (Little Egret)

Egyptians — mean score 2.2, range 1-3.

Americans — mean score 2.3, range 1-4.

Panel comments: "tastes like crab meat" (E); "very fishy, dry" (A); "tough" (A); and "good, sort of strange aftertaste" (A).

Egrets (species unspecified) formed part of the third course of Henry IV's coronation feast in 1399 and were served at a banquet honoring John Stafford's ordination to the Episcopate in 1425 (Austin 1888). At the feast of Archbishop Nevil, in the reign of Henry IV (1399-1413), no less than a thousand egrets (species unspecified) were served (Gurney 1921). A test panel in Zambia gave the meat of this species a rating of 6.3 on a scale of 9.0 (excellent) to 2.0 (inedible) (Cott and Benson 1969).

*Ardea cinerea* (Gray Heron)

Egyptians — mean score 2.5, range 1-3.

Americans — mean score 3.3, range 1-5.

Panel comments: rather mixed and ranged from "very bad" (E); "absolutely wretched" (A) and "fishy" (A) to "good—beefy flavor" (A) and "very much like beef" (A).

The opinion on the worth of this species for western European tables has apparently changed in recorded history (Wheaton 1983). Early positive evaluations include: in 1399 this species was served during the coronation feast of Henry IV (Austin 1888); in the Household Book for 1507 (reign of Henry VII) kept by the Duke of Buckingham's servants, this species was mentioned several times in the household provisions (Gage 1834); in 1532 when Henry VIII entertained the King of France and the Count of Flanders at Calais, the parties consumed over 440 Gray Herons in four days (Bourne 1981); in 1555 during the ceremonies of the Serjeants of London's Inner Temple, 36 Gray Herons were served; in 1577 when Queen Elizabeth visited Kirtlige, Cambridgeshire, 28 young birds were prepared (Gurney 1921); and throughout the 16th century the Lords of the Star Chamber Court enjoyed herons at their tables (Simon 1952). By the 19th century the bird seems to have fallen from the favor in the upper class, as MacPherson (1897) noted that commoners ate adult Gray Herons in all seasons. Simon (1952) remarked that only birds with unbroken bones should be cooked, since the bones hold a fishy fluid that contaminates the meat.

*Phoenicopterus ruber* (Greater Flamingo)

Egyptians — mean score 2.5, range 1-4.

Americans — mean score 3.8, range 3-5.

Panel comments: "very sweet" (A); "very tender, but sour" (A); "curious after-taste" (A); "strong aftertaste" (A); and "very good, interesting aftertaste" (A).

There was no comment from the Egyptian participants.

A. Wilson (in Cott 1945) mentioned "that the flesh of the flamingo is esteemed pretty good meat and the young thought by some equal that of the partridge." Blanford (1898) concurred with this opinion and noted that they are excellent eating when in good condition. Others, however, considered them "flavourless and stringy" (Cott 1946) and "not very good" (Fitzgibbon 1976). It should be noted that the flamingo meat served to the panel was from an immature individual and presumably more tender than the flesh of a typical adult.

*Anas crecca* (Green-winged Teal)

Egyptians — mean score 3.0, range 2-5.

Americans — mean score 3.1, range 2-4.

Panel comments: ranged widely, from "very good, like 10 [= *Aythya nyroca*]" (A), "like duck" (E), and "good texture" (A) to "fishy, tough, overcooked" (A) and "flavor too strong" (A).

The general consensus in the literature is that this species is "greatly esteemed as an article of food" (Morris and Tegetmeier 1895). Ray (1678) noted, "This Bird for the delicate taste of its flesh, and the wholsom nourishment it affords the body doth deservedly challenge the first place among those of its kind." In recent times

(1950-62) Green-winged Teal have been offered for sale in the markets of Paris, where the meat is considered "delicate" in taste (Pecqueur 1963). It has been important historically as food in England, where gentry and royalty consumed it readily. This species was served to the diplomatic parties when Henry VIII met with the King of France and the Count of Flanders at Calais in 1532 (Bourne 1981). During the 16th century the Lords of the Star Chamber Court also indulged in this meat (Simon 1952). As of 1942 it could still be found in the markets of London (Simon 1952).

*Anas acuta* (Northern Pintail)

Egyptians — mean score 1.8, range 1-4.

Americans — mean score 3.5, range 3-4.

Panel comments: "like beef—sweet" (A); "texture like beef, not fishy" (A); "ok—a little tough, no tang" (A); and "tasteless" (E).

In virtually every published comment obtained on the palatability of this species the opinion was favorable, except in a few where it was noted as fishy (see Simon 1952). Yarrell (1843) noted, "This species is one of the best of the various ducks for the table; the flesh is excellent, and in great esteem." The same opinion holds generally today in Europe (Fitzgibbon 1976). However, the Egyptian participants did not uphold this view of the Northern Pintail, and they gave it the lowest mean score of all the bird meats sampled, while the Americans scored it considerably higher.

*Aythya nyroca* (White-eyed Pochard)

Egyptians — mean score 2.5, range 1-4.

Americans — mean score 3.6, range 2-5.

Panel comments: "pretty good" (A); "sandpaper texture, dry" (A); "very tasty and very tender" (A); and "beef taste and texture" (A). There was no comment from the Egyptian panelists.

A bird seller at Port Said called this species one of the choicest, most succulent and widely sought after ducks wintering in the Nile Delta. This opinion was independently corroborated by other informants from the Nile Delta. Fitzgibbon (1976) considered this species particularly good for brazing and *pate*. Blanford (1898), in reference to birds obtained in India, considered its meat of "inferior flavour," and Morris and Tegetmeier (1895) noted at times "it is very good, but at other times is fishy." In the markets of London, at least during the first half of the 19th century, White-eyed Ducks were sold (Yarrell 1843).

*Gallus gallus* (domestic chicken)

First sample:

Egyptians — mean score 3.0, range 2-5.

Americans — mean score 3.4, range 2-4.

Panel comments on the first sample: "chicken flavor" (A); "chicken?" (E); "not



bad—a bit tough—tastes like chicken" (A); "a little tough" (A); and "tough, weird taste" (A).

Second sample:

Egyptians — mean score 3.8, range 2-5.

Americans — mean score 4.1, range 2-5.

Panel comments on the second sample: "definitely domestic" (A), "very good—like very tender, very juicy chicken" (A); "sweet tender" (A); "well-cooked" (E); and "rubbery" (A).

Millenia of appraisals by countless cultures have established *Gallus* as the classic table bird. In Renaissance England it was popular with the royalty, and in 1532 when Henry VIII entertained the King of France and the Count of Flanders at Calais, 5616 chickens were served to the diplomatic parties in four days (Bourne 1981). Even Red Junglefowl (the wild progenitor of our domestic chicken) are reported to be very good eating, particularly the young birds (Blanford 1898). Many members of the panel associated these two anonymously presented samples with chicken.

*Porphyrio porphyrio* (Purple Gallinule)

Egyptians — mean score 3.0, range 2-4.

Americans — mean score 3.8, range 2-5.

Panel comments: "sweet" (A), "nice taste" (A), and "excellent—tastes as if sauteed in soya sauce, moist and tender" (A), while others considered it "salty" (1 E and 1 A), "fishy" (A) and "rubbery" (A).

Literature on the palatability of this species is apparently scant. Meinertzhagen (1930) noted that its flesh is fishy, but not totally unpalatable. Its relatively high mean score is surprising in view of Meinertzhagen's comments. Fitzgibbon (1976), calling the meat stringy, recommended that Moorhens and Gallinules should be skinned rather than plucked.

*Philomachus pugnax* (Ruff)

Egyptians — mean score 2.2, range 1-3.

Americans — mean score 3.0, range 1-4.

Panel comments: ranged from "light in flavor" (A), to "moldy" (A); "strong aftertaste" (A); and "heavy, tasteless" (A). We received no written comments from Egyptian panel members.

Shorebirds in general are considered fine fare, and Ruffs "when in good condition are excellent eating" (Blanford 1898). In early 17th century England, Ruffs were served to lords (Simon 1952). In the first half of the 19th century (Yarrell 1843), and as recently as 1922 (Simon 1952), this species was brought to English markets, where it was sold "fatted" or "shot." In Paris markets it was offered for sale between 1950 and 1962 (Pecqueur 1963), though perhaps for plumes rather than meat.

*Limosa limosa* (Black-tailed Godwit)

Egyptians — mean score 2.6, range 2–4.

Americans — mean score 3.3, range 2–4.

Panel comments: "a bit sour" (E); "flavor a bit strong" (A); and "really beefy in flavor" (A).

Godwits have received wide acclaim for their gastronomic quality (Fitzgibbon 1976). Muffet (1655) noted, "but a fat Godwit is so fine and light meat, that noblemen, yea, and merchants too, by your leave, stick not to buy them at four nobles a dozen." In 1567, 22 godwits were served at a wedding in Norfolk, England, and between 1520-1550 this bird was noted commonly in the provision accounts of the le Strange household, Hunstanon, England (Gurney 1834; Gurney 1921). Blanford (1898) regarded it as especially delicious when fed on grain. A merchant in Paris offered ten adults for sale in October 1958 (Pecqueur 1963), and they could be found in the London market until at least 1922 (Simon 1952). The name godwit is from the Anglo-Saxon *god* 'good' and *wiht* an 'animal,' or perhaps literally "good eating," which presumably refers to the delicacy of its meat (Swann 1913).

*Recurvirostra avosetta* (Avocet)

Egyptians — mean score 2.2, range 1–4.

Americans — mean score 2.8, range 2–4.

Panel comments: varied from "good" (A) and "looks strange tastes good" (E) to "tough and dry and rather tasteless" (A) and "not much taste" (A).

Little information could be found on the palatability of this species. Anderson (1872, cited in Cott 1946) considered it "not unpalatable" and Fitzgibbon (1976) noted that it has a slight fishy flavor. In at least the first half of the 19th century it was sold in English markets (Yarrell 1843) and is still popular in the Poitou region of France (Fitzgibbon 1976).

*Larus fuscus* (Lesser Black-backed Gull)

Egyptians — mean score 2.8, range 1–5.

Americans — mean score 3.4, range 2–5.

Panel comments: ranged from "pretty good" (A); "OK-but tough" (A); and "a little heavy" (A) to "tough, stringy, gamey taste" (A). No comment was received from Egyptian panel members.

In modern western societies gull is generally considered poor tasting (Fitzgibbon 1976). However, in Renaissance England this does not appear to have been the case, for in the early 1400s they were part of the fare served at the wedding feast of the Earl of Devonshire (Austin 1888), and Henry VIII served gull to the King of France, the Count of Flanders and their diplomatic parties in 1532 at Calais (Bourne 1981). Gulls were purchased in the late 16th century for Lords to eat (Simon 1952). In mid-August 1634, during the visit of Charles I and Queen Henrietta Maria at Althrop, over six dozen gulls were served (Simpkinson 1860).

In the 17th century gulls were often captured alive, fattened in captivity and then consumed (Gurney 1921). Cott (1946) mentioned that a Mr. Hartley informed him that "though he expected to find the flesh [of Herring Gulls *Larus argentatus*] nauseating, this was not the case: 'The breast . . . I should describe as tasteless to faintly gamey.' "

*Oryctolagus cuniculus* (domestic rabbit)

First sample:

Egyptians — mean score 1.2, range 1-2.

Americans — mean score 2.5, range 2-4.

Panel comments on the first sample: varied from "good—almost a five" (A); to "very bad indeed" (E); "rather tasteless—a bit tough" (A) and "very tough, stringy, rubbery" (A).

Second sample:

Egyptians — mean score 2.6, range 2-5.

Americans — mean score 1.9, range 1-3.

Panel comments on the second sample: "taste is good, texture gamey" (A) to "a little better than leather" (A); "rubbery" (A); and "chewy" (E).

This domestic animal is widely consumed in Egypt today and is available in most of the country's markets. In view of its popularity it was somewhat surprising that the Egyptian participants rated this meat so low. The way the meat was prepared is different from the standard Egyptian method, which may in part account for their low scores.

## DISCUSSION

From the experimental results, it is clear that the sample sizes are too small to allow any useful detailed statistical analysis. Summary statistics, however, reveal several notable intra- and cross-cultural patterns (Table 1). In 17 of the 18 cases the American participants rated the samples higher on average than their Egyptian counterparts; the exception was the second sample of domestic rabbit. For several species the differences were particularly marked, for example, Northern Pintail—3.5 (A) compared to 1.8 (E). Many of the taxa the Americans rated highly are generally considered unpalatable by their recent cultural tradition. In particular these include grebe, godwit, gull, and gallinule, all of which receive a higher than average (2.5) mean score. We interpret this as showing that at least some social prejudices against the consumption of certain animals were not based on the supposed offensive nature of their meat, but rather only on cultural attitudes.

It must be pointed out that the meat of any species cannot be presumed to possess certain constant, unchanging qualities. An individual animal's diet can influence secondary compounds assimilated into their flesh and some of the supposed "offensive" birds noted above may indeed be so when they are eating certain foods. Individuals of a species may consume different foods during

different seasons, and thus, the taste of its flesh would vary. The effect of diet on meat flavor varies interspecifically, even for animals with similar diets. Further, the fattening of captive animals with raw grain, bread, and/or milk, as practiced during the Renaissance period of England, would greatly enhance their flavor.

The reason the Egyptians scored the different meats lower on the mean than the Americans is not clear. It may simply be the result of the latter group having more experience with a wider range of foods. This would be particularly true of Americans in Egypt, who through traveling have been exposed to a greater variety of foods. It should be noted that one Egyptian participant systematically rated the meats low, which reduced the mean score of this group. Also, our method of preparing the meat differed from the typical Egyptian technique for waterbirds (ducks and geese). Generally these animals are stuffed with grain and nuts, spiced with onion, pepper and cumin, and roasted (Khalil 1980; pers. obs.). Thus, it is the combination of spice and the inherent flavor of the meat that gives fowl such a high gastronomic reputation in Egyptian cuisine. This point may be exemplified by the Northern Pintail, whose meat is widely sought after by Egyptian bird market patrons, but which received an extremely low average score of 1.8 and was considered "tasteless" by the Egyptian panelists. On the other hand, Americans, particularly of the social class that took part in this experiment, often eat plainly cooked meat (e.g. steak) devoid of spice, and the taste and consistency of the meats presented to the panel may have been more familiar to the Americans than the Egyptians.

Not only can the quality of a given bird meat vary dramatically between individual animals, but a culture's perception of a given species' palatability can change significantly through time. This is exemplified by the consumption of the Gray Heron in the British Isles. In the markets of London during the 14th century a roasted heron was five times more expensive than a leg of pork (Riley 1868). During the Renaissance period this species was eaten by the gentry and royalty (see species summary above). During this time lords protected and managed heronries on their lands (Ray 1678) and some ardeids were used in quasi-medicinal ways (Broode 1547). By the early 19th century the gastronome's opinion of its flesh had changed and Selby (1833) remarked "But indeed the low estimation in which the flesh of the [Gray] Heron is now held, would seem to be in a great degree the effect of prejudice, or the fashion of taste, as, under proper treatment and good cookery, the Heron, when fat and in fine condition, is but little inferior to some of our most approved wild fowl." By the late 19th century it apparently fell completely out of approval with the upper classes and was only eaten by the common people (MacPherson 1897). Thus, as described by Felley-Harnik (1981:10), "It is owing precisely to the complex interrelationship of cultural categories that food is commonly one of the principal ways in which differences among social groups are marked."

With the advent of the Industrial Revolution in western Europe, the subsequent advances in animal husbandry (e.g. mass production of chickens), and increased efficiency in the storage of products and their distribution, the previous burden of a daily hand-to-mouth existence was partially relieved. It appears that

it was during this time that many species which had been considered desirable in the Renaissance period, or at least had been consumed by the gentry and royalty, fell out of favor. In some cases certain wild birds were taken for sport, a pastime generally available only to the upper class and often at the explicit exclusion of other classes. An important point is that it was then possible for the general public to obtain very palatable foods without abandoning nutrition and presumably those species that were not choice were no longer consumed. Certainly the ability to choose the meat of one animal over another of equal nutritional value, solely on taste, was a new luxury. Thus, as Rea (1981:80) points out, "Taboos are a luxury."

Similar phenomena of changing preferences and perceptions of palatability may be noted in Egypt. The recent introduction of modern animal farming practices into Egypt (e.g. modern poultry factories), as well as western cultural ideas, seems to have resulted in a change in the more traditional meats consumed, particularly in the larger cities. This was presumably accomplished by more efficient, or at least greater mass production of several domestic animals, and a network for their distribution. Thus, there has been a shift to domestic animals. The people consuming wild birds purchased in the Nile Delta markets are generally members of the higher Egyptian social classes. The price per unit weight of meat (£ Egyptian/kg meat) of many wild birds for sale in these markets exceeds that for some domesticated animals. For example, as of the early 1980s the approximate cost of Little Bittern (*Ixobrychus minutus*) was 3.40 £/kg; Green-winged Teal was 3.57 £/kg; Little Crake (*Porzana parva*) was 4.76 £/kg; and Marsh Sandpiper (*Tringa stagnatilis*) was 5.23 £/kg (Meininger and Mullie 1981), compared to 4.00 £/kg for lamb; 2.20 £/kg for domestic rabbit and 2.85 £/kg for chicken. The wealthy have the financial liberty of buying domestic animals or the relatively more expensive wild birds, and in many cases they choose the latter. The other sector of modern Egyptian society that consumes wild birds is wildfowlers, who sell the animals to the wealthy, but retain some birds for their own use.

The wide range of opinion given by the taste-testing panel for some samples indicates that tremendous variation of opinion exists within each culture on the palatability of certain species and that cultural opinion is not directly related to the intrinsic taste quality of meat. Whether the low scores were a function of neophobia or the actual taste of the meat is difficult to say, but both factors may have played a role in forming opinions. Further, genetically inherited differences in the assessment of palatability may account for some variation in individual opinions. Inferences about variation in palatability between cultures are unfounded, since many different factors determine personal and cultural opinions of taste.

In the final analysis, it seems misleading to draw cross-cultural inferences on variations in the perceived edibility of given food items because so many factors, ecological and cultural as well as personal and collective, influence the human palate.

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## BOOK REVIEW

**Prehistoric Hunter-Gatherers: The Emergence of Cultural Complexity.** T. Douglas Price & James A. Brown, eds. *Studies in Archaeology*. New York: Academic Press, 1985. Pp. xvii. 450. n.p. (hardcover).

The subtitle of this book is more accurate and indicative of content than the main title. This is not a book about hunting and gathering. Rather, it is a book about increasing complexity in the socio-economic and belief systems of prehistoric groups who may be classified as hunter-gatherers because they putatively depended largely on wild resources for their subsistence. Because it does not focus on subsistence systems themselves, readers primarily interested in the relationships between specific animal or vegetable resources and human cultures are likely to be disappointed. Most of the studies do not even consider the relative importance of animals, vegetables, and fish in the diet, let alone the particular species exploited, the technologies involved in their exploitation, or the balance between calories received and energy expended in particular subsistence pursuits. What they do instead is concentrate on what hunters and gatherers do when they are not busy hunting and gathering. The results are stimulating and theoretically interesting for our total understanding of hunting-gathering lifestyles, and of the sources of cultural change and complexity.

The book grew out of a symposium on "Complexity among Prehistoric Hunter-Gatherers" at the XIth International Congress of Anthropological and Ethnological Sciences in Vancouver, BC, in 1983. Additional essays and discussions were included in the final volume. The purpose of the symposium and book are clearly set forth by the editors in the Preface (p. xiii):